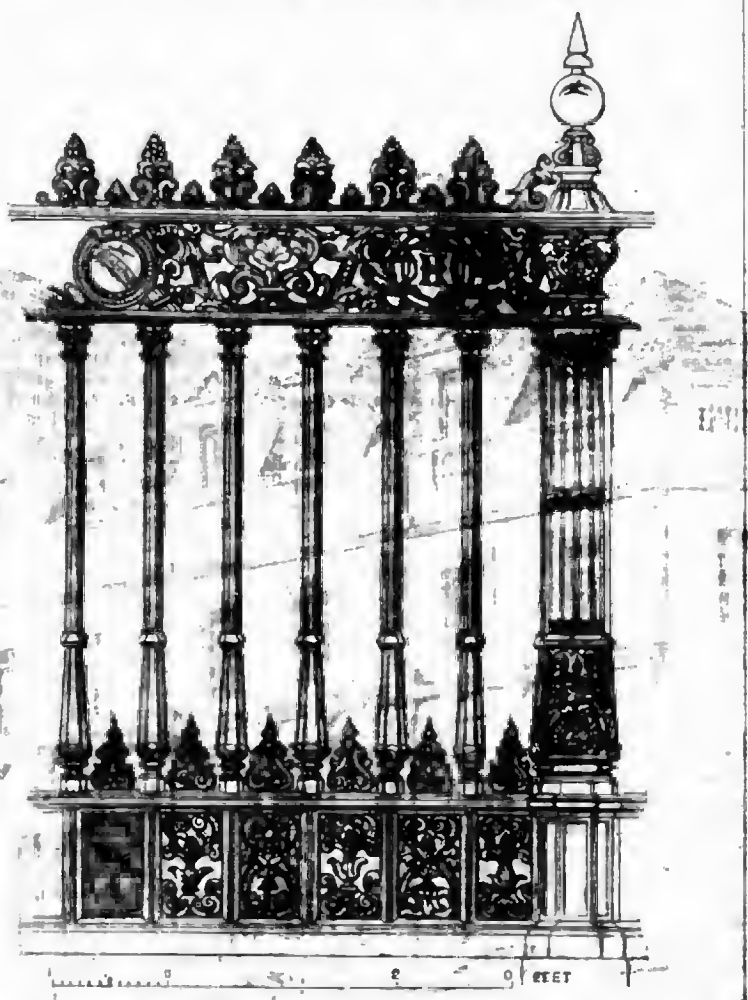
IRON RAILING, MR. HOPE'S MANSION.



a general service to the inhabitants of the middle portion of London, than 100 acres at the extreme ends.

The high ground about Copenhagen is an invaluable spot for the formation of a reservoir of *air*, both for the supply of the centre of London and for the access thereto of the inhabitants. This spot (be it secured on a large or small scale, whether from King's-cross to Highgate, or less) is invaluable; the thousands who are wont to resort thereto indicate its need of being, in some shape or other, secured as a public convenience. A space is taken for a model prison in this neighbourhood, and surely the consideration of the health and morals of thousands is worth a similar-sized spot, *at least*, for public recreation of a simply natural kind, viz., to obtain fresh air, and observe green herbage of some sort.

If the opportunity of forming a large or small reservoir of air in the sides of London be neglected now, when small comparative expense will effect it, the time will come when the most extensive demolition must be effected in order to *air* London, and give space for its inhabitants; fever and plague will not be stayed till thousands upon thousands be expended in this manner, and the very spots now uncovered will be then again laid bare for obvious purposes of general need."

PROJECTED WORKS.—Advertisements have been issued for tenders, by 1st proximo, for extensive works at the South-Eastern Railway stations at Old Kent-road and at Ashford; by 24th inst., for a warehouse and three coal sheds at the London and Brighton Railway station, at Croydon, and a warehouse at their Eastbourne station; by 1st January, 1850, for a bridge, wharfing, widening river, and removing old bridge, at Great Yarmouth; and by 29th inst., for works at two third-rate houses at Wilmington-square.

RAILWAY JOTTINGS.

THE traffic of branch lines in general, if not, too, of some main ones, it would appear, may ere long be altogether conducted by light engines, at great saving of expense. Experiments have occasionally been recorded in THE BUILDER that seemed to promise fairly for such a result, which further experience only appears to confirm. The *Railway Times* of 13th inst. gives the particulars of a personal examination of the doings and dimensions of one of these little, active, and even singularly powerful agents, built by Messrs. England and Co., of the Hatcham Ironworks, and at present at work on the Bow branch of the Blackwall line. It whirls a train of seven of the heavy Blackwall carriages, equal, it is said, to ten of the carriages in general use on other railways, up an incline of 1 in 100, at a speed of 35 miles an hour, starting as freely and getting into speed as readily as any other engine. The dimensions of this *Pigmy Giant*, as it is named, are as follows:—Cylinders, [illegible] diameter; stroke, 12 inches; driving-wheels, 4 feet 6 inches; four carrying wheels, 3 feet diameter; 80 tubes, 1¾ inch diameter, 11 feet 4 inches long. The engine and tender are constructed on the same frame, with six wheels, and she is capable of carrying coke and water in her tender sufficient for a journey of 30 or 40 miles. The consumption of coke is less than 5 lbs. a-mile, producing, nevertheless, an immense quantity of steam. The weight of the whole engine, when in full working order, is about 10 tons. The centre of gravity being very low, there is no oscillation, even at a very high velocity. The day's work on the Bow branch is a run of about 200 miles.——A slip of the embankment at Bosley, on the North Staffordshire line, took place last week, extending to about 100 yards.——The Whitehaven and Furness Junction line is now open from Whitehaven to Ravenglass. The contractors are busily engaged in pushing forward the work from Ravenglass to Bootle, with 300 'navvies' and artizans. The contract for the line between Bootle and Broughton-in-Furness, has been let to Messrs. Fell and Joplin, of Greenodd, near Ulverstone.——The contract for the extension of the Furness line from Crooklands to Lindal has been taken by Mr. Wheatcroft, of Matlock.——One of the engines on the Furness Junction, with a passenger-train, on 13th inst., ran through the Whitehaven terminus, knocked down the yard wall, stove in the side of a school-house substantially built of stone, carried away the kitchen, and lodged in the back parlour. So far, fortunately, none of the little scholars were in the way, but a poor young girl, who was singing to herself while preparing food at the kitchen-fire, was dreadfully mutilated and instantaneously killed, and her brother was much bruised and burnt. The line slopes down to the terminus at a gradient of 1 in 100. The cause of the accident is said to have been want of sufficient lineage in the state of the rail, which was covered with ice.——The Caledonian Company have completed their tunnel at Glasgow. Entering at St. Rollox, it passes near the tunnel on the Edinburgh and Glasgow on the one hand and under the Monkland Canal on the other, and runs within a few feet of both towards the station at the head of Buchanan-street.——Mr. James Mitchell, of the firm of Ross and Mitchell, contractors, and Mr. G. Glennie, resident engineer of the Hawick branch of the North British Railway, were placed at the bar of the circuit court at Jedburgh, on 2nd instant, on a charge of culpable homicide, and neglect or violation of duty. The case, it may be remembered, arose out of the fall of a viaduct in course of erection over the river Teviot, at Roxburgh, for the Kelso branch of the Hawick line, whereby eight persons were killed and several others injured. The indictment charged Mr. Mitchell with having allowed the pier of the viaduct to be constructed of insufficient materials. Mr. Glennie was charged with culpable neglect of duty in having failed to superintend and inspect the erection of the viaduct, and to see that it was properly and safely built with good, sufficient, and safe materials. The case went on till suddenly stopped by the alarming intimation, that one of the Jury was seized with premonitory symptoms of cholera, on the announcement of which the court adjourned, and the trial, we presume, will begin *de novo*, unless the juryman speedily recovered.

THE SYPHON VENTILATOR.

INGENIOUS men, delighted with any new observation that occurs to them, too often take it for granted that the same discovery never occurred to any other human being, and place themselves in a false position, when a little inquiry would dispel the delusion. In this respect the mania for patents of invention, with the necessity for secrecy on their object, frequently leads to mischief, and causes a man of intelligence to throw away 400*l.* on a patent, that not only is not worth so many farthings, but which may drive him into litigation and ruin. As the average of successful patents is but three in a hundred, I need not say how often this must be the case. I have known many crude cases of this kind, but that of Dr. Chowne particularly surprises me. One would think that gentleman must have been blind, deaf, or asleep,—anything but alive to the progress of science and its application to buildings, if he supposes himself the discoverer of a new system of ventilation by means of an "up shaft and a down shaft." He is equally in error if he imagine that he can maintain a patent for a principle: our law allows the patent right for a mode of operation and construction, not on a principle. As to the mode of ventilating by the syphon or atmospheric gravitation process, it is known to every miner, and ought to be to every architect, since Mr. Griffith's excellent lectures some years ago, at the Royal Institute of British Architects, in which it was clearly shown and explained. There are also various applications of it in London and its vicinity. Mr. Place, of Brompton-square, has for many years had his library warmed by a simple adaptation of the law of gravitation of hot